

REMARKS

Status of the Claims

Claims 1-26 are pending, with claims 1, 14, and 24-26 being independent.

Initially, the undersigned would like to thank Examiner McAvoy for the courtesies extended during the personal interview conducted on February 5, 2007, during which the pending claims and U.S. Patent Nos. 5,491,269 ("Colle '269"), 6,222,083 ("Colle '083"), and 6,194,622 ("Peiffer") were discussed.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 102/103

Claims 1-26 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over Colle '269, Colle '083, and Peiffer. Applicants respectfully disagree with the rejection; therefore, this rejection is respectfully traversed.

As previously explained, the present invention adds water to a hydrocarbon containing fluid to enhance the watercut of the hydrocarbon containing fluid. Sufficient water may be added such that, even though hydrates may form from hydrocarbon hydrate forming components in the hydrocarbon containing fluid, such hydrates cooperate with the added water to form a flowable slurry rather than allowing the hydrates to form a plug in the flow line. Accordingly, the claims recite that the water cut enhanced hydrocarbon containing fluid consists essentially of hydrocarbon containing fluid, water, and optionally salt or brine.

"[T]he examiner is of the position that the claim language 'consists essentially of' does not exclude minor amounts of the prior art inhibitors. Additionally, although the prior art references to Colle '269, Colle '083 and Peiffer teach that the polymeric based hydrate inhibitors are added to a solvent such as water, it is not clear that *only* the added hydrate inhibitors, and not the water, result in the prevention of blockage in the flow line."

(Emphasis in Original; Office Action, Page 6).

As noted in MPEP § 2141.02, subsection VI., a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Despite the Examiner's assertion that in the cited references "it is not clear that *only* the added hydrate inhibitors, and not the water, result in the prevention of blockage in the flow line", Applicants respectfully submit that each of the cited references teaches the use of *hydrate inhibitors* to prevent hydrate formation and thus blockage in a flow line. (See Column 2, Lines 23-27, of Colle '269; Column 2, Lines 24-29, of Colle '083; and Column 2, Lines 29-34, of Peiffer). Specifically, each of the cited references is directed to solving the need for a *gas hydrate inhibitor* that can be conveniently mixed at *low concentrations* in produced or transported petroleum fluids[, and which] reduce[s] the rate of nucleation, growth, and/or agglomeration of gas hydrate crystals in a petroleum fluid stream and thereby inhibit the formation of a hydrate blockage in the pipe conveying the petroleum fluid stream.

(Emphasis Added; Column 2, Lines 6-12, of Colle '269; Column 2, Lines 1-7, of Colle '083; and Column 2, Lines 6-12, of Peiffer).

As the Examiner points out, the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original).

Applicants respectfully submit that the basic and novel characteristic of the claimed invention is the use of water added to the hydrocarbon containing fluid as the primary mechanism to prevent hydrate formation blockage in a flow line rather than relying on hydrate inhibitors.

Thus, despite the Examiner's "position that the claim language 'consists essentially of' does not exclude minor amounts of the prior art inhibitors", Applicants respectfully submit that the inclusion of hydrate inhibitors, for example, hydrate inhibitors that can be mixed at *low concentrations* of about 0.01%, according to Colle '269, Colle '083, and Peiffer, *does materially* affect the basic and novel characteristic of the claimed invention, as the claimed invention avoids not only the need to incur the cost of providing hydrate inhibitors, but also the handling and disposal of hydrate inhibitors. (See, for example, Page 2, Lines 8-22, of the present specification).

Colle '269 does not disclose adding water to a hydrocarbon containing fluid to enhance the watercut of the hydrocarbon containing fluid, or more specifically, adding sufficient water such that, even though hydrates may form from hydrocarbon hydrate forming components in the hydrocarbon containing fluid, such hydrates cooperate with the added

water to form a flowable slurry rather than allowing the hydrates to form a plug in the flow line. Rather, Colle '269 discloses a (ball stop) time of 6.2 minutes for a 0.95 centimeter stainless steel ball to stop moving the full length of a capped 15 mm ODx12.5 cm long test tube containing 3 mL of tetrahydrofuran (THF) and 9 mL of ASTM synthetic seawater (SSW) in a THF test. (Column 7, Lines 38-53). According to Colle '269, a threshold inhibition effect for an inhibitor requires a ball stop time (BST) for a THF/SSW solution with an inhibitor which is about three times the BST for a THF/SSW control solution with no inhibitor present. (Column 7, Lines 54-65).

Claim 2 recites the method of claim 1 wherein sufficient water is added such that the water cut of the water cut enhanced hydrocarbon containing fluid is at least 50%; claim 3 recites the method of claim 1 wherein sufficient water is added such that the water cut of the water cut enhanced hydrocarbon containing fluid is at least 75%; and claim 4 recites the method of claim 1 wherein sufficient water is added such that the water cut of the water cut enhanced hydrocarbon containing fluid is at least 85%. With regard to claims 2-4, the Examiner acknowledges that "the specific amounts of water in some of the dependent claims is not set forth in the prior art". (Office Action, Pages 3, 4, and 5). The Examiner asserts, however, that each of the cited references "teaches that any convenient concentration of inhibitor in the carrier solvent can be used." (Office Action, Pages 3, 4, and 5).

First, Applicants point out, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131. Thus, the Examiner, in stating that "the specific amounts of water in some of the dependent claims is not set forth in the prior art", has acknowledged that claims 2-4 are not anticipated by the cited references.

Further, even if each of the cited references "teaches that any convenient concentration of inhibitor in the carrier solvent can be used", as asserted by the Examiner, the cited references do not anticipate claims 2-4, which each recite a minimum percentage of the water cut of the water cut enhanced hydrocarbon containing fluid. The water cut of the present claims would correspond to the carrier solvent of the cited references, rather than the inhibitor of the cited references, which is excluded by the present claims.

Accordingly, withdrawal of the rejection of Claims 1-26 under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over Colle '269, Colle '083, and Peiffer is respectfully requested.

Conclusion

In view of the foregoing remarks, reconsideration of the claims and allowance of the subject application is earnestly solicited.

Respectfully submitted,
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